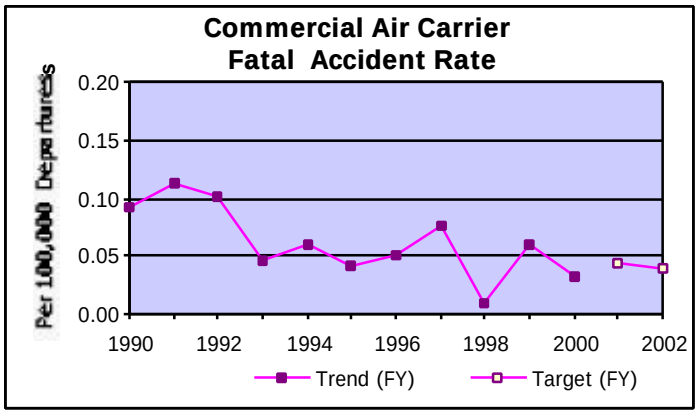
MAJOR PROGRAM PERFORMANCE

AIR

In the program performance area of air transportation, commercial aviation continues to be one of the safest forms of transportation. Improvements continue to be made in the area of international aviation growth, with the addition of 11 new open-skies agreements.

SAFETY

AIR CARRIER FATAL ACCIDENT RATE



Performance Measure: Fatal aviation accidents (U.S. commercial carriers) per 100,000 departures.

2002 Goal: .038

2001 Goal: .043

2000 Goal: .045

2000 Performance: .033#
Preliminary estimate

Commercial aviation is one of the safest forms of transportation. But when passengers board an airplane, they give up personal control and face an unfamiliar risk. While fairly rare, aviation accidents can have catastrophic consequences, with large loss of life. The public demands a high standard of safety, and expects continued improvement. DOT's goal is an 80 percent reduction in the U.S. commercial air carrier fatal accident rate by 2007.

In absolute terms, the fatal accident rate in commercial aviation is very low. One of the primary reasons for this is the use of jet aircraft. Also contributing to a lower accident rate are technological advances in both avionics and radar, and operational procedural improvements.

Based on preliminary data, DOT met the goal: the air carrier fatal accident rate was .022 per 100,000 flight hours and .033 per 100,000 departures.

Under the FAA and industry partnership's Safer Skies Agenda, several critical steps were completed in addressing problems related to controlled flight into terrain and uncontained engine failure. Interventions for controlled flight into terrain included:

- Improved training aids for both pilots and air traffic controllers;
- Validation of software parameters for Minimum Safe Altitude Warning; and
- A Final Rule related to the manufacture and installation of Terrain Awareness Warning System

- equipment — a new generation of automated warning systems used on flight decks.

Interventions for uncontained engine failure included:

- Additional Airworthiness Directives addressing Low Pressure Turbine engine components and compression priority parts; and
- An Advisory Circular to incorporate an enhanced inspection methodology in the aircraft engine design approval process was opened for public comment.

Intervention strategies being developed under Safer Skies rely heavily on historical data. New methods of collecting, analyzing, and using current data are being developed and deployed. The FAA documented a prototype Flight Operations Quality Assurance (FOQA) system that provides maximum potential for the use of digital flight data to determine national trends relevant to the safety of flight operations, aircraft performance, and aircraft maintenance. The FAA's Safety Performance Analysis System (SPAS) continued to be expanded by the addition of new performance measures covering aircraft and engines, rotorcraft, air agency schools, and repair stations. The Air Transportation Oversight System (ATOS) Element Query was also linked to SPAS. SPAS assists FAA in improving its deployment of inspection resources. ATOS is a systems approach to safety oversight of air transport operators.

FAA continued to sharpen programmatic focus on safety, with inspection and technological resources being concentrated on the highest risk areas. Work continued on aging aircraft and their systems, fuel tank safety, wiring harness and fuselage insulation flammability.

Management Challenge – Commercial and General Aviation Safety (IG/GAO)

The IG and GAO have stated that the FAA must take steps to reverse the trend in known safety risks such as runway incursions and operational errors, strengthen oversight and rulemakings, and manage the aviation safety and air traffic control workforce strategically over the long term. The IG stated that safety must take priority over the impact of increased demand, new technologies and budget cuts. Several safety issues that the FAA needs to address were listed by the IG.

FAA faces many challenges in promoting aviation safety in a dynamic industry. To judge its progress in promoting aviation safety, DOT has done and will plan to do the following:

FY 2000

- Initiated DOT/FAA oversight of U.S. carriers' safety audits of their foreign code-share partners. Guidelines were announced, and FAA began quarterly audits of U.S. carriers' code-share partners in November 2000.
- Continued to implement the Aircraft Safety Act of 2000 that stiffened penalties for trafficking in suspected unapproved parts (SUP). FAA initiated 262 SUP investigation cases and the IG obtained 9 indictments related to the sale and use of SUPs.
- FAA issued over 40 airworthiness directives on electrical wiring and 18 on fuel systems for large

commercial aircraft. FAA and industry also conducted inspections of in-service aircraft that are 20 years old or more to assess the condition of the U.S. transport fleet with respect to wiring and to identify other areas of concern.

- Published Flight Operational Quality Assurance (FOQA) NPRM in July 2000.

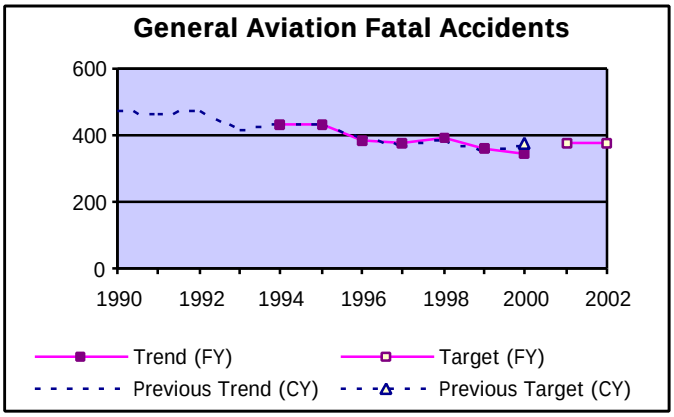
FY 2001

- To help improve runway safety, the first Airport Movement Area Safety System (AMASS) will be operational (34 airports will have operational AMASS systems by September 2002).
- FAA has begun initial system safety training for ATOS inspectors.
- FAA will publish a Flight and Duty Time Rule Supplemental NPRM by September 2001.
- As part of a general Departmental effort, FAA will complete a strategic human resource plan for safety and air traffic control personnel, ensuring that workforce training and succession issues are embedded in FAA's strategies and resource plans.
- FAA will publish an NPRM for National Air Tour Safety Standards by September 2001.
- The FAA receives several hundred reports per year relating to SUPs, and has set a standard for assigning an investigation to the responsible field office within 5 days from receipt. Field offices are carrying out these investigations as quickly as possible.

FY 2002

- FAA will determine the feasibility of expanding ATOS beyond currently covered large air carriers to smaller commercial air carriers.

GENERAL AVIATION FATAL ACCIDENTS



Performance Measure: Number of fatal general aviation accidents.

2002 Goal: 379

2001 Goal: 379

2000 Goal: 379

2000 Performance: 347#
Preliminary estimate

Public and corporate aircraft provide a wide range of services — such as crop dusting, fire fighting, law enforcement, news coverage, sightseeing, industrial work, on-demand air taxi service, and corporate transportation — and privately owned aircraft provide personal transportation and recreation. General Aviation (GA) is an important element of the U.S. transportation system and the U.S. economy, and the majority of aviation fatalities have occurred in this

segment of aviation. Since 1988, there has been a gradual trend downward in the number of general aviation accidents, but progress has not been steady. DOT is working with the GA community to achieve further improvements in safety.

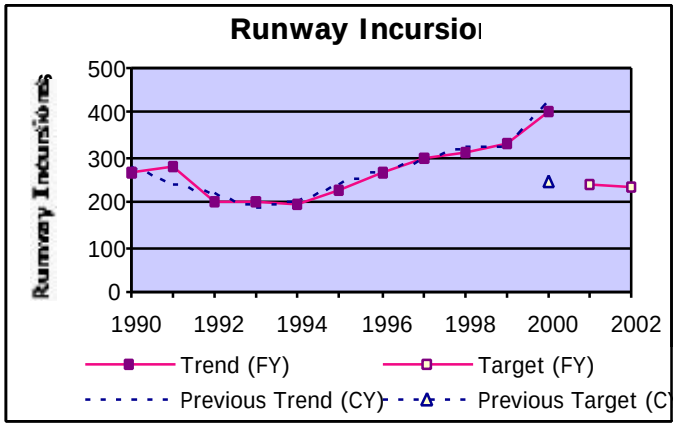
General Aviation (GA) includes all segments of the aviation industry except commercial air carriers and the military. Aircraft range from single-seat home-built aircraft, to rotary wing craft, balloons, and extended-range turbojets. Levels of risk are highly variable within this aviation segment and regulatory oversight varies considerably. Some elements of general aviation operate in hazardous environments, such as agricultural application, external-load operations, fire fighting, and pipeline/power line patrol.

Based on preliminary data, DOT met its target.

The GA community and the FAA jointly developed the annual performance goal. The goal takes into consideration a projected 1.6 percent per year increase in activity in this sector. With this increase in activity, the number of GA accidents would also increase if there were no further interventions.

Working together, FAA and the general aviation industry have formed a Joint Steering Committee to link safety improvement efforts, focusing in particular on five causal factors, the majority of which are common to commercial aviation — controlled flight into terrain, loss of control, runway incursions, weather, aeronautical decision-making, and survivability. The Committee completed accident and incident data analysis in the categories of controlled flight into terrain and weather, settled on an appropriate set of interventions, and devised and initiated detailed implementation plans. Implementation will continue through FY 2005.

RUNWAY INCURSIONS



Performance Measure: Number of runway incursions.

2002 Goal: 236

2001 Goal: 243

2000 Goal: 250

2000 Performance: 403

Runway incursions create dangerous situations that can lead to serious accidents. A runway incursion occurs when an aircraft, vehicle, person, or object on the ground creates a collision hazard or results in a loss of separation with an aircraft taking off, intending to take off, landing, or intending to land. Reducing the number of runway incursions will lessen the probability of accidents that potentially involve fatalities, injuries, and significant property damage.

Increases in airport operations raise the risk of runway incursions. Some of the additional factors that contribute to the complexity of this safety problem are aircraft of different types and capabilities moving in close proximity; weather changes that impact visibility and conceal normal visual cues; unclear signs and surface markings; pilots unfamiliar with an airport; and complex and varied airport geometry.

DOT did not meet the target, and the trend is in the opposite direction from the goal. Runway incursions increased to 429 from 322 in CY 1999, a 33 percent increase. Runway incursions fall into three general classifications: operational errors, pilot deviations, and vehicle/pedestrian deviations, with different characteristics and rates of change.

- Total Pilot Deviations, the largest category of runway incursions, increased by more than 38 percent. Over half the deviations were attributable to communications lapses and pilots' unfamiliarity with airports.
- Total vehicle/pedestrian deviations were up by more than 12 percent, almost two-thirds of which were due to maintenance, construction, and security or emergency vehicle deviations.
- Operational errors increased by more than 7 percent, mostly attributable to communications and procedural lapses.

The main causal factors for runway incursions continue to be communications, airport knowledge, and situational awareness when operating on the airport surface. Improved guidelines and incident reporting provisions resulted in increased reporting, and revealed shortcomings in both areas. The FAA appointed a Director of Runway Safety, and broadened the program's approach by creating a comprehensive Runway Safety Program. Using this approach, FAA conducted a series of regional runway Safety Workshops, reaching out to all interested members of the aviation community, and culminating in a Human Factors Symposium, and Runway Safety National Summit. This summit focused on recommendations, actions, and results from regional workshops, the Human Factors Symposium, and other industry-wide activities to improve runway safety.

The FAA published a *National Blueprint for Runway Safety*, containing major action areas. FAA began implementation of the near-term initiatives in October 2000. Regional runway safety managers were selected; a centralized library of training, education and awareness was established; and improved runway marking standards were promulgated. Each area includes initiatives that may be implemented individually or integrated with other initiatives to provide an effective, comprehensive solution to this important problem. The major areas are:

- Training — Several initiatives are designed to enhance knowledge, skills and overall performance of pilots, controllers, vehicle operators, and other personnel who interact on the airport surface.
- Technology — Establish a Runway Incursion Technical Evaluation team, complete implementation of existing technology (Airport Surface Detection Equipment, Airport Movement Area Safety System, and

Airport Surface Detection Equipment-Model X), coordinate runway safety technology initiatives with NASA and the aviation community, and develop innovative implementation strategies to ensure promising runway safety technologies are made available for various airports.

- Communications — Simplify and standardize radio communications within the community to those involved in surface operations.
- Procedures — Segregate ground vehicles from the airport operations area whenever possible, follow-up on perimeter road construction, continue studies on strengthening the Code of Federal Regulations section that requires positive clearance onto runways, and develop and implement national standard operating procedures for tower controllers.
- Airport Signs/Marking/Lighting — Improve the airport environment, increase visibility, enhance safe and efficient movement of aircraft, and test pilot knowledge of airport signs, markings and lighting.
- Data, Analysis, and Metrics — In an effort to better measure how well initiatives are performing, the Runway Safety Office plans to change FAA policy, where necessary, to improve the quality and quantity of data on runway incursions.

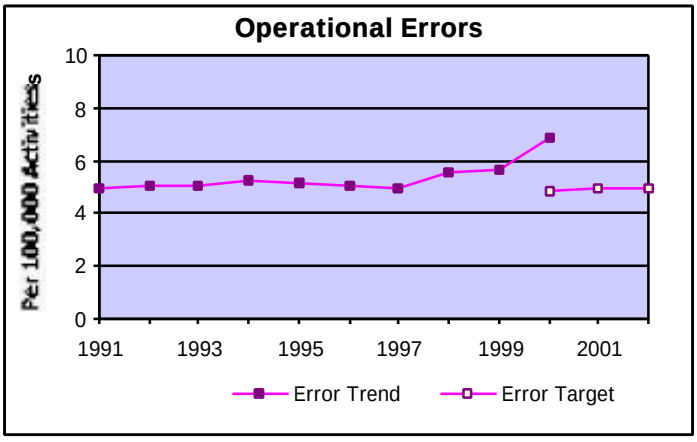
Although prevention of all incursions is important, analysis indicates that all runway incursions might not pose the same level of risk. FAA will develop ways of categorizing risk to more effectively focus on root causes, and to more effectively target resources toward the most serious causes. Risk categorization and analysis will also yield better indicators of FAA's effectiveness in improving runway safety.

Management Challenge – Runway Safety (IG)

Despite significant management focus, FAA has been unable to reverse the upward trend in runway incursions. The IG has indicated that reversing the sharp increase in runway incursions is a critical management challenge for DOT. FAA is pursuing a number of initiatives begun in 2000 to solve this problem, and, as the IG states, is identifying and evaluating technologies that can be quickly put to use in high-risk airports.

This goal in its entirety addresses the Inspector General's discussion of runway safety in the recent Management Challenges Report.

AIR TRAFFIC OPERATIONAL ERRORS



Performance Measure: Operational errors per 1 million activities.

2002 Goal: 5

2001 Goal: 5

2000 Goal: 4.86

2000 Performance: 6.84

One of the fundamental principles of aviation safety is “separation” — the need to maintain a safe distance from aircraft, terrain, obstructions, and certain airspace not designated for routine air travel. Air traffic controllers employ separation rules and procedures that define separation standards for many different environments where aircraft operate. Pilots flying under visual flight rules operate under a "see and avoid" policy. Pilots using instrument procedures rely on air traffic controllers' instructions to guide them. When the rules and procedures that define separation standards are not applied or followed appropriately by a controller, and separation is less than required, an operational error occurs. DOT seeks to reduce operational errors.

The continued increase in the volume of air traffic activity in congested and restricted airspace is a major factor affecting operational errors. From 1999 to 2000, air traffic operations in the top 30 airports increased by 4.3 percent, compared to a 0.2 percent increase from 1998 to 1999.

DOT did not meet the target for reducing operational errors. Operational errors totaled 1,145, or 0.684 per 100,000 activities, significantly above the goal of 0.486 per 100,000 activities.

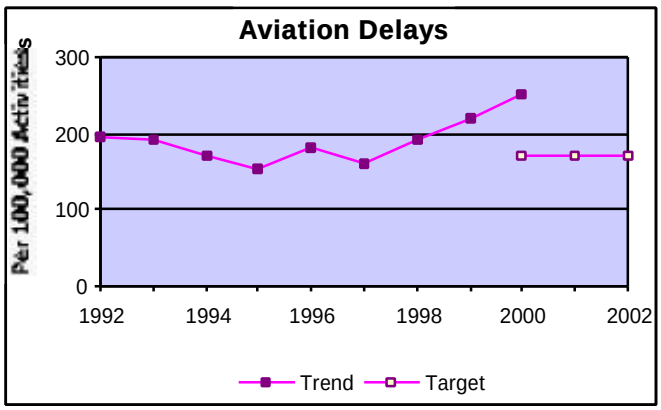
Operational deviations, at 352, or 0.210 per 100,000 activities, also missed the goal of 0.097.

FAA continued its effort to improve the procedures, reporting, and correction of operational errors and deviations after instituting a Quality Assurance Review (QAR) process in 1999 to identify and correct controller performance deficiencies through training. The FAA improved its internal procedures, requiring management involvement in controller re-certification following an operational error or deviation.

More importantly, safety improvement is emphasized by means of operational error reporting, causal analysis, and problem correction, rather than on using controller error reports as an indication of a failure requiring punitive action. This renewed emphasis on data quality and procedural improvement, and the lessening of punitive measures, has contributed to the increase in reported errors and deviations. This structural change is evident in the increase in the level of monthly operational errors for FY 2000, compared to 1997-1999.

MOBILITY

AVIATION DELAY



Performance Measure: Aviation delay per 100,000 activities.

2002 Goal: 171

2001 Goal: 171

2000 Goal: 171

2000 Performance: 250

Commercial aviation delays are estimated to cost airlines over $3 billion per year. Passengers are directly affected by missed flight connections, missed meetings, and loss of personal time. There are approximately 20 congested airports, each averaging over 20,000 hours of flight delay per year. Delays throughout the system are projected to increase as passenger travel demand continues to rise.

Delays throughout the National Airspace System (NAS) are generally the result of air traffic density, adverse weather, and capacity constraints, particularly at large hub airports. As traffic increases throughout the system, delays are likely to increase. Consequently, maintaining the current delay rate would represent a significant accomplishment.

DOT did not meet its performance target; in fact, the overall delay rate significantly exceeded the target, because of bad weather, which accounted for about 70 percent of all delays. Over 270 delays per 100,000 activities were due to weather alone in June 2000, the worst month of flight delay in FAA history.

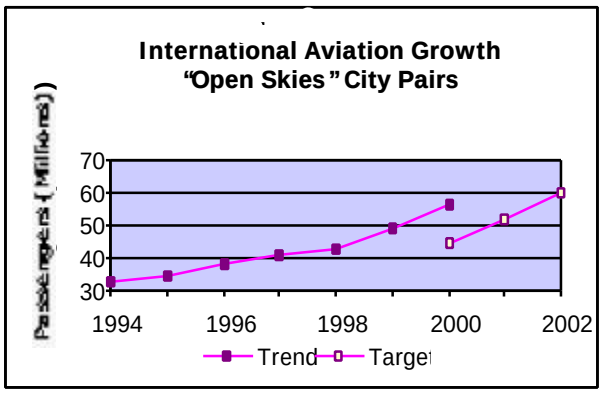
Volume delays, at about 34 per 100,000 activities, increased significantly in 2000, partly due to the overall increase in activities from FY 1999 to FY 2000 (1.9 percent), and partly due to the increase in exempted flights operating out of congested, high-density airports. For example, while August 2000 operations at LaGuardia were 4.7 percent above those in August 1999, terminal volume delays rose by 329 percent.

Approximately four delays per 100,000 activities were due to equipment failure in 2000, less than the 1999 rate of five per 100,000. The National Operations Control Center (NOCC) will continue to collaborate daily with Air Traffic System managers to ensure National Air Space equipment and services available on any given day are put to optimal use.

"Other" delays (including runway delays), at about 39 per 100,000 activities, are slightly above last year. While delays due to runway construction at Minneapolis and Seattle have abated, projects are underway at Houston, Phoenix, and St. Louis. The unavailability of Land and Hold Short Operations (LAHSO) at several airports has also added to delays.

ECONOMIC GROWTH AND TRADE

INTERNATIONAL AIR SERVICE



Performance Measure: Number of passengers (in millions) in international markets with open skies aviation agreements.

2002 Goal: 59.7

2001 Goal: 51.6

2000 Goal: 44.7

2000 Performance: 56.3#
Preliminary estimate

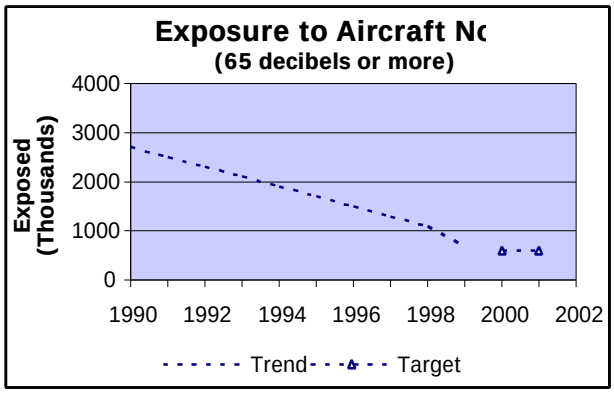
Since the 1940s international air transportation has been subject to restrictive bilateral agreements that raise prices and artificially suppress aviation growth. DOT's policy is to open international air travel to market forces and remove these bilateral limitations on the freedom of U.S. and foreign airlines to increase service, lower fares, and promote economic growth. DOT does this through "Open Skies" agreements. These agreements have made it possible for the airline industry to provide better quality, lower priced, more competitive service for millions of passengers in thousands of international city-pair markets. These agreements benefit travelers throughout the world, as well as the general economies of the United States and other nations.

Agreements to foster greater access are negotiated on a nation-by-nation basis, and must balance conflicting interests. Negotiating agreements and achieving passenger growth goals may be influenced by the strength of the world's economy and by regional economic cycles.

Based on preliminary data, DOT met the performance target. DOT added eleven new open-skies agreements — with Qatar, Tanzania, Dominican Republic, Portugal, Slovak Republic, Namibia, Burkina Faso, Ghana, Turkey, The Gambia, and Nigeria. Forty-seven nations around the globe now have agreed to "open skies" with the United States. In addition, the United States has an open "transborder" agreement with Canada.

HUMAN AND NATURAL ENVIRONMENT

AIRCRAFT NOISE EXPOSURE



Performance Measure: Number of people in the U.S. (in thousands) who are exposed to significant aircraft noise levels (65 decibels or more).

2002 Goal: N/A

2001 Goal: 600

2000 Goal: 600

2000 Performance: N/A

Public concern and sensitivity to aircraft noise around airports is high. In recent years, noise complaints have increased even while quieter aircraft technology has been introduced. Aircraft noise is an undesired by-product of our mobility, and the Government acts to reduce the public's exposure to unreasonable noise levels.

Much of the recent progress has been achieved by the legislatively mandated transition of airplane fleets to newer-generation aircraft that produce less noise. Most of the gains from this change were achieved by 2000. The Airport Noise and Capacity Act (ANCA) of 1990 set December 31, 1999 as the deadline for elimination of Stage 2 (older, noisier) aircraft weighing more than 75,000 pounds. Population growth around airports or increasing flight activity can impact FAA's ability to meet this goal. These factors have generally increased the numbers of people potentially exposed to aircraft noise. A positive factor in lowering noise exposure has been aircraft fleet recapitalization within the industry.

DOT appears to have met the performance target, since trends apparent in both measurement methodologies are moving in the right direction. The results reflect using a new, more accurate methodology to assess the number of people exposed to significant levels of aircraft noise around airports, known as MAGENTA. The model development has been done in conjunction with the Committee on Aviation Environmental Protection (CAEP) under the International Civil Aviation Organization (ICAO).

Updated airline fleet data for 1999 indicate a higher than expected introduction of airplanes that have been "hushkitted" to comply with the Stage 3 noise standard. At the end of 1999, airplanes that met the most stringent FAA noise standard (Stage 3 airplanes) comprised 100 percent of the total fleet of large civil subsonic turbojet airplanes, compared to an estimated 45 percent in 1990 when Congress enacted ANCA.

Activities in 2000 included funding for noise reduction activities such as the soundproofing of residences and buildings used for educational or medical purposes in the vicinity of airports, the purchase of buffer zones around airports, and noise reduction planning.

The FAA, representing the United States, was successful in achieving agreement at the fifth meeting of CAEP (CAEP/5) on a new international noise standard for subsonic jets and propeller-driven large transports. The new standard, which would become effective in 2006 when approved by the ICAO Council, is cumulatively 10 decibels more stringent than the current standards ("Stage 3").